Addendum

Mountains Recreation and Conservation Authority
Malibu Road Beach Accessway

Introduction

Background

In 2002, the California State Coastal Conservancy ("Coastal Conservancy") proposed to construct a new Beach Accessway, on a vacant lot along the south side of Malibu Road, on the southern edge of the City of Malibu, in the County of Los Angeles. The proposed Malibu Road Accessway is intended to implement the public access goals of the Coastal Zone Management Act of 1972, the Coastal Zone Protection Act of 1996, and the California Coastal Act. It will provide one of the proposed vertical accessways contained within the Draft Local Coastal Program. On August 8, 2002, the California State Coastal Conservancy adopted a Mitigated Negative Declaration (MND) pursuant to the California Environmental Quality Act (CEQA) and approved the project.

Description of the Malibu Road Accessway Project

To provide the vertical access between Malibu Road and Amarillo Beach, a stairway would be constructed on the site. This stairway would take beach-goers from approximately 35 feet in elevation along Malibu Road to approximately 7 feet of elevation at the top of the beach. The stairway would include landings for viewing the ocean, including one at the top of the stairway that would be wheelchair accessible. The steepness of the slope and the limited size of the property would prevent inclusion of a wheelchair ramp at this location.

The stairways and landing would be held in place by six-by-eight-inch pressure-treated Douglas-fir timbers, attached by No. 5 rebar in pre-drilled holes, placed four-feet on center. The steps and landings themselves would be composed of stabilized sand, except for the landing at the top of the slope, which would be constructed of plastic wood decking.

A fence would be constructed along the top of the existing soldier pile wall. This wall currently is topped by a concrete cap. Into this concrete cap, holes would be

drilled and vertical metal fence posts will be installed. The posts would have a maximum spacing of four inches. The top of the fence posts would vary in height to create a wave pattern. The existing concrete cap would be finished with a slurry coat. A gate would be provided that can be closed at night or when restricted access is required due to safety reasons such as storm damage, tsunamis, etc. Signage would be provided at the gate, explaining the rules of the beach, such as no dogs, firearms, fires, etc., and the location of other public accessways along Malibu Road.

Use of the site is expected to be similar to that currently provided for and allowed at nearby beach accessways managed by the Los Angeles County Department of Beaches and Harbors. No lifeguard would be on duty, and the hours of operation are expected to be sunrise to sunset. No bathrooms would be provided.

No additional parking would be provided. People using the accessway would be able to use the existing on-street parking on either side of Malibu Road, as is done for the other beach accessways in the area.

Regulatory Setting

According to CEQA Guidelines Section 15164(b), “An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent environmental impact report (EIR) or negative declaration have occurred."

CEQA Guidelines Section 15164(c) indicates, “An addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration.”

Finally, CEQA Guidelines Section 15164(d) indicates, “The decision making body shall consider the addendum with the final EIR or adopted negative declaration prior to making a decision on the project.”

Traffic Impact Analysis

Need for Traffic Impact Analysis

The 2002 Mitigated Negative Declaration did not address climate change or greenhouse gases, as described below (Climate Change Analysis). To support analysis of potential climate change impacts, a traffic impact study was undertaken (Appendix A, *Malibu Road Beach Accessway: Traffic Impact Assessment*.

Existing Traffic Conditions

Traffic operations are measured by level of service (LOS), which ranges from LOS A through LOS F; with LOS A and B representing uncongested free conditions, LOS C and D representing higher volume but still stable conditions, LOS E representing volumes that are at or approaching capacity, and LOS F representing congested conditions with stop-and-go traffic.

Malibu Road

The project site is located off of Malibu Road, a two-lane road that primarily provides access to residences and small commercial establishments. Malibu Road is an east-west road that is roughly parallel to the Pacific Coast Highway (State Route 1). Access to Malibu Road is provided at both ends by the Pacific Coast Highway—approximately one and a half miles to the west of the project site, and one half mile to the east. Based on Highway Capacity Manual guidelines (Transportation Research Board 2000), the capacity of the local road is estimated at 500 vehicles per lane per hour, or 1,000 vehicles per hour. Observation of the road indicates very low traffic volumes under existing conditions (LOS A).

Public parking in the area is provided on the existing shoulder on Malibu Road. At the proposed Malibu Road Beach Accessway site, the shoulder has capacity for approximately 12 to15 vehicles to park, adjacent to the site on the south side of the road. The remainder of the south side of the road primarily fronts single-family homes, so very little additional public parking is available. The majority of additional parking space is located on the north side of Malibu Road, where fewer houses are located. Within 500 feet of the project site, there are pockets of shoulder on the north side of Malibu Road that can accommodate parking for approximately 20 to 30 vehicles. Observation of the area indicates that some of the available parking supply is already being utilized under existing conditions.

Pacific Coast Highway

The Pacific Coast Highway is the only major arterial in the City of Malibu. The City of Malibu General Plan indicates that traffic on the Pacific Coast Highway consists primarily of commuters during the weekday peak hours, and, on the weekends, it is the primary road that provides access to the beach and other recreational activities located along the coast. Pacific Coast Highway is also a designated bicycle route. (City of Malibu 1995) According to the General Plan, average daily traffic (ADT) varies along its length, ranging from approximately 18,000 to 52,000 vehicles per day. More recent (2008) data from the California Department of Transportation (Caltrans) estimates an ADT of approximately 42,000 vehicles per day (Caltrans 2009), indicating that traffic levels have remained relatively stable over the past 10 to 15 years, experiencing little to no overall growth.

The General Plan identifies 10 key intersections along the length of the Pacific Coast Highway. Malibu Road is not one of these key intersections. According to the General Plan, only one intersection is identified as having congested conditions: Pacific Coast Highway and Topanga Canyon Road, located approximately 7 miles to the east of the project site. (City of Malibu 1995)

Traffic Conditions with Project

Traffic generated by the proposed Malibu Road Beach Accessway would be constrained by available parking; and no additional parking is proposed as part of the project. Thus, the most conservative estimate of vehicles generated at any given time would be approximately 45 vehicles, if all available parking spaces were utilized by vehicles generated by the accessway (as noted above, some existing parking supply is already being utilized). In the unlikely event that all 45 vehicles were generated in the same hour, this represents less than 5 percent of the estimated capacity of the road. It is expected that even under this very conservative scenario, operations on Malibu Road would remain at LOS A.

Potential traffic generated by the Malibu Road Beach Accessway represents less than 1 percent of traffic on Pacific Coast Highway, and thus would have a negligible effect on its operations. In addition, it is expected that very few new trips would be generated by this project. Instead, recreational travelers seeking beach access would already be on the road, whether or not the Malibu Road Beach Accessway exists. The proposed project would provide one more option for a location where they could stop.

Impact Determination

Traffic generated by the proposed Malibu Road Beach Accessway would be constrained by the parking that is available at the site. No additional parking supply is proposed as part of the project. Under the most conservative scenario, which estimates that all potential traffic that could be accommodated by available parking supply occurs during the same hour, operations on Malibu Road and on Pacific Coast Highway would remain at acceptable levels. Thus, the traffic impact that would result from the proposed project is considered to be less than significant.

Climate Change Analysis

Need to Address Climate Change

The 2002 Mitigated Negative Declaration did not address climate change or greenhouse gases (GHG). Since 2002, the California legislature has passed numerous pieces of legislation and the Governor has issued several executive

orders related to GHG emissions and climate change. While no single regulation currently limits the emissions of a single project, collectively, these laws and executive orders set a quantitative, state-level GHG reduction target and establish the state's approach and institutional framework for reaching this target. The key state regulations related to GHG emissions are:

- Executive Order S-3-05, establishing reduction targets for the state;
- Assembly Bill 32 (AB 32), codifying a comprehensive program of regulatory and market mechanisms to achieve specific reductions of GHG emissions in California;
- California Air Resources Board (CARB) Mandatory Reporting Rule, specifying that certain facilities emitting more than 25,000 metric tons per year of GHGs must submit annual reports;
- Senate Bill 97 (SB 97), requiring that the Office of Planning and Research (OPR) prepare guidelines regarding feasible mitigation of GHG emissions or the effects of GHG emissions required by CEQA; and
- CEQA Guidelines Section 15064.4, as amended in 2010, requiring lead agencies to analyze a project's GHG emissions, and confirming the discretion of lead agencies to determine appropriate significance thresholds.

Impact Assessment

Methodology

The proposed project will result in construction emissions originating in areas under the South Coast Air Quality Management District (SCAQMD) jurisdiction. At this time, the SCAQMD has limited guidance on preferred methodological approaches for estimating project-level GHG emissions due to construction. The GHG analysis relied on approaches and models commonly used to quantify emissions at the regional and state level to estimate direct impacts of construction activities. Total project emissions are presented to demonstrate compliance with the regulations of the SCAQMD.

The SCAQMD has not adopted final significance thresholds for project level GHG emissions due to either construction or operations of the project. However, interim guidance from the SCAQMD is available. SCAQMD guidance states that for the purposes of determining whether or not GHG emissions from affected projects are significant, estimates of project emissions should account for direct, indirect, and, to the extent information is available, life cycle emissions during construction and operation.

An impact related to climate change was considered significant if it would:

- conflict with an applicable plan, policy or regulation adopted for the purposes of reducing the emissions of greenhouse gases; or

- generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment, per the SCAQMD tiered decision tree approach.

Operational Impacts

The proposed site is a vacant lot along the south side of Malibu Road. The proposed project would not result in operational emissions of GHGs because it would not generate additional traffic or require additional energy to operate. As such, an analysis of operational GHG emissions is not necessary. There will be no indirect impacts (such as growth-inducing effects) as a result of project implementation.

Construction Impacts

During construction, GHG emissions would occur. These emissions were analyzed for the Malibu Road Beach Accessway project, as documented in Appendix B, *Malibu Road Beach Accessway: Greenhouse Gas Technical Memorandum*.

Construction of the project would generate GHG emissions from the following typical construction activities:

- Construction workers traveling to and from project sites;
- Delivery and hauling of construction supplies and debris to and from project sites; and
- Fuel combustion by construction equipment (including demolition, site preparation and grading equipment).

Greenhouse Gas Emissions Summary

As shown in Table 14 of Appendix B, total CO_2e emissions from all construction activities anticipated to occur would amount to approximately 116 metric tons of carbon dioxide equivalents (CO_2e). Amortized over a 30-year project lifetime, as recommended by the SCAQMD, project emissions are 3.9 metric tons CO_2e per year.

The following summarizes the results of the SCAQMD tiered decision tree approach:

Tier 1

The project does not qualify for an applicable exemption under CEQA.

Tier 2

The City of Malibu does not currently have an adopted GHG reduction plan. Therefore the project should be considered under Tier 3.

Tier 3

Although the GHG emissions that will result from the construction of the project are (3.9 metric tons CO_2e per year) well below the Tier 3 threshold (3,000 metric tons CO_2e per year), the SCAQMD recommends as part of Tier 3 that project proponents undertake all feasible actions to increase energy efficiency and GHG emissions associated with a project as a best management practice (BMP) and demonstration of commitment to the state's GHG emissions reduction goals. Actions that will reduce emissions, without further action by the proponent are described below:

- Existing CARB regulations (Title 13 of the California Code of Regulations, Sections 2480 and 2485, 2008), which limit idling of diesel-fueled commercial motor vehicles.
- CARB's proposed Early Action Measures, including Pavley fleet regulations (AB 1493), the Low Carbon Fuel Standard, and GHG reduction measures for heavy-duty on-road vehicles.

Additionally, the Coastal Conservancy intends to implement the following GHG reduction actions during construction, as part of the project:

- Require that contractors maintain tire inflation to the manufacturers' inflation specifications.
- Implement a construction worker education program, including such elements as limiting idle time of construction equipment, using low-sulfur diesel fuels in construction equipment, regular maintenance of construction equipment, tire inflation, and using grid power whenever feasible to avoid on-site generators.
- Use alternatively fueled construction equipment on site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel.
- Encourage the use of biodiesel fuel for diesel-powered equipment and vehicles.
- Encourage construction workers to carpool.
- Encourage recycling construction waste.

In addition, the Coastal Conservancy is implementing the following voluntary actions to further reduce GHG emissions:

- Coastal Conservancy staff will work with applicants to identify, evaluate, and incorporate reasonable measures to reduce the GHG emissions of Conservancy-funded projects. The Coastal Conservancy will encourage use of BMPs and innovative designs that reduce GHG emissions and, as possible will support the development of such practices and designs through funding and other actions.

- Project design and construction methods must include measures to avoid or minimize GHG emissions to the extent feasible and consistent with the project objectives.
- CARB has adopted AB 32 Early Action Measures, and equipment used during construction of the project will be subject to these requirements. The Coastal Conservancy will implement the appropriate Early Action Measures as they become effective.

Impact Determination

Given the small amount of GHGs that would be emitted from the proposed project during construction, continuing implementation of GHG reduction actions by the Coastal Conservancy, and the lack of change between existing and future operation-related activities, the proposed project would not conflict with the state's goals of reducing GHG emissions to 1990 levels by 2020. Therefore, this potential impact would be less than significant under the SCAQMD CEQA Guidelines.

Environmental Determination

2002 Mitigated Negative Declaration

The Initial Study prepared for the 2002 MND identified the potential effects on the environment from the establishment of the proposed accessway and evaluated the significance of these effects. Based on the Initial Study, the 2002 MND determined that the proposed project would have less-than-significant effects or no impacts related to the following issues:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities and Service Systems

The environmental assessment presented in the Initial Study identifiee a number of environmental impacts that required mitigation measures be incorporated into the project to effectively reduce potential impacts to less-than-significant levels or avoid the impacts. These are:

- Cultural Resources
- Geology and Soils
- Noise

The measures would effectively mitigate all of the potentially significant environmental impacts identified in the Initial Study. Implementation of these mitigation measures would avoid potentially significant impacts identified in the Initial Study or reduce them to a less-than-significant level. The mitigation measures are presented below.

Discovery of Archaeological Resources or Human Remains During Construction

MMV-1. If buried cultural resources, such as chipped or ground stone, historic debris, building foundations, or human bone, are inadvertently discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the Coastal Conservancy.

If human remains of Native American origin are discovered during project construction, compliance with state laws, which fall within the jurisdiction of the Native American Heritage Commission (Public Resource Code Sec. 5097), relating to the disposition of Native American burials will be adhered to. If any human remains are discovered or recognized in any location other than a dedicated cemetery, excavation or disturbance of the site shall stop, including any nearby area reasonably suspected to overlie adjacent human remains, until:

a. The coroner of the county has been informed and has determined that no investigation of the cause of death is required; and

b. if the remains are of Native American origin,

1. The descendants of the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or

2. The Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the commission.

According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100) and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission.

Impacts from Unstable Soil or Slope Failure

MMVI-1. A geological engineer shall be retained to review the proposed project plans and construction specifications and determine what measures are necessary, if any, to prevent the slope failures from being caused by the construction and use of the project accessway. All recommended measures shall be implemented during project construction.

MMVI-2. Materials used for landings shall be permeable, allowing water to percolate naturally into the slope. Surface drainage shall be directed towards the downslope side of the stairway and landing to prevent water from draining into and saturating the slope.

MMVI-3. No irrigation shall be used on the site.

MMVI-4. Construction shall avoid destabilizing the bluff. Equipment and material storage, as well as construction operations, shall be carried out so that the amount of external vibration and surcharge to the slope is minimized at all times.

MMVI-5. A geological engineer shall monitor construction to ensure that the bluff is not destabilized. Alternative construction methods shall be used, if necessary, as recommended by the geological engineer, to prevent failures.

MMVI-6. The existing retaining wall shall be monitored on an annual basis after the rainy season and after any significant rainfall or storm event (such as the heavy rainfall of January 1995 or a tsunami) to determine whether additional cracking or blowouts have occurred near the top of the wall or whether the wall is tilting. If these occur, it is an indication that the stability of the wall is being compromised. If these occur, a geologic engineer shall be retained to recommend repairs to re-stabilize the slope and these recommendations shall be implemented.

MMVI-7. Following earthquakes of magnitude 4.0 or greater felt in the Malibu area, the stairway shall be inspected by a geological engineer to determine if it has been damaged by groundshaking, liquefaction, or landslides. If any damage has occurred, the stairway will be closed to the public until repairs can be made and the site inspected by a geological engineer and deemed to be safe.

Impacts from Soil Erosion or the Loss of Topsoil

MMVI-8. In conjunction with MMVI-4, Construction shall avoid erosion of top soil.

Impacts from Noise Generated during Construction

MMXI-1. Pile driving shall not be used on-site unless previously approved by a geologic engineer. Instead, pile holes will be drilled.

2010 Addendum

The 2002 Mitigated Negative Declaration for the Malibu Road Beach Accessway may be used to fulfill the environmental review requirements of the current project. Because the current project meets the conditions for the application of State CEQA Guidelines Section 15164, preparation of a new environmental document is not required for the issue areas discussed above.

References

California Climate Action Registry. 2009. *California Climate Action Registry General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions.* Version 3.1. Appendix C, Table C.3, C.4, and C.6. January.

California Department of Transportation (Caltrans). 2009. 2008 Average Annual Daily Traffic. http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/. Accessed June 2010.

Gaines, L., A. Vyas, and J. L. Anderson. 2006. *Estimation of Fuel Use by Idling Commercial Trucks. Center for Transportation Research*. January. Waschington, D.C. Available: <http://www.transportation.anl.gov/pdfs/TA/373.pdf>. Accessed: June 7, 2010.

Malibu, City of. 1995. General Plan, Circulation and Infrastructure Element.

Jones & Stokes Associates. 2007. *Software User's Guide: URBEMIS2007 for Windows.* Version 9.2. Appendix A, Page A-6. November. Sacramento, CA. Prepared for: South Coast Air Quality Management District.

South Coast Air Quality Management District. 2008. *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold.* October. Diamond Bar, CA.

Transportation Research Board. 2000. Highway Capacity Manual. Special Report 209. Washington, DC.

Appendix A: Traffic Report

Traffic Impact Assessment
Malibu Road Beach Accessway

Purpose

The purpose of this memorandum is to assess the potential effect on traffic and circulation of the proposed Malibu Road Beach Accessway, which would be located on a vacant lot along the south side of Malibu Road, on the southern edge of the City of Malibu.

Background

The proposed Malibu Road Beach Accessway is intended to implement the public access goals of the Coastal Zone Management Act of 1972, the Coastal Zone Protection Act of 1996, and the California Coastal Act. It will provide one of the proposed vertical accessways contained within the Draft Local Coastal Program. On August 8, 2002, the California State Coastal Conservancy adopted a Mitigated Negative Declaration (MND) pursuant to the California Environmental Quality Act (CEQA) and approved the project.

The accessway has not been built in the eight years since the MND was adopted. Now the Mountains Recreation and Conservation Authority (MRCA) proposes to construct the project. CEQA allows a lead agency to prepare an addendum to an adopted MND if only minor changes have occurred with respect to the circumstances under which the project is to be undertaken. In this case, there has been a minor change in the Coastal Conservancy policies related to climate change. The new policy was adopted on June 4, 2009, in accordance with the Global Warming Solutions Act of 2006 (AB 32), the Governor's Executive Orders S-3-05 (2005) and S-13-08 (2008), the Governor's Office of Planning and Research Technical Advisory (June 18, 2008), and revisions to the CEQA Guidelines that took effect on March 18, 2010. The adopted policies include the requirement for the consideration of climate change in evaluating projects. Climate change was not addressed in the 2002 MND. Therefore, a subsequent environmental analysis is necessary to address this issue. Because very limited climate change impacts would be anticipated, based on the information provided

in this document, the proposed action complies with the CEQA requirements for an Addendum.

Description of the Project

To provide the vertical access between Malibu Road and Amarillo Beach, a stairway would be constructed on the site. This stairway would take beachgoers from approximately 35 feet in elevation along Malibu Road to approximately 7 feet of elevation at the top of the beach. The stairway would include landings for viewing the ocean, including one at the top of the stairway that would be wheelchair accessible. The steepness of the slope and the limited size of the property would prevent inclusion of a wheelchair ramp at this location.

A gate would be provided that can be closed at night or when restricted access is required due to safety reasons such as storm damage, tsunamis, etc. Signage would be provided at the gate, explaining the rules of the beach, such as no dogs, firearms, fires, etc., and the location of other public accessways along Malibu Road.

Use of the site is expected to be similar to that currently provided for and allowed at nearby beach accessways managed by the Los Angeles County Department of Beaches and Harbors. No lifeguard would be on duty, and the hours of operation are expected to be sunrise to sunset. No bathrooms would be provided. No additional parking would be provided. People using the accessway would be able to use the existing on-street parking on either side of Malibu Road, as is done for the other beach accessways in the area.

Existing Traffic Conditions

The Malibu Road Beach Accessway site is located on Malibu Road, a two-lane road that primarily provides access to residences and small commercial establishments located along it. Malibu Road is an east-west road that is roughly parallel to Pacific Coast Highway (State Route 1). Access to Malibu Road is provided at both ends by Pacific Coast Highway—approximately one and a half miles to the west of the project site, and one half mile to the east.

Traffic operations are measured by level of service (LOS), which ranges from LOS A through LOS F; with LOS A and B representing uncongested free conditions, LOS C and D representing higher volume but still stable conditions, LOS E representing volumes that are at or approaching capacity, and LOS F representing congested conditions with stop-and-go traffic. The General Plan

defines traffic volume-to-capacity ratio (V/C) range for each LOS designation as follows:

- LOS A: V/C = 0.00 – 0.60
- LOS B: V/C = 0.60 – 0.70
- LOS C: V/C = 0.70 – 0.80
- LOS D: V/C = 0.80 – 0.90
- LOS E: V/C = 0.90 – 1.00
- LOS F: V/C > 1.00

(City of Malibu 1995)

Pacific Coast Highway is the only major arterial in the City of Malibu. According to the General Plan, average daily traffic (ADT) varies along its length, ranging from approximately 18,000 to 52,000 vehicles per day. At its junction with Las Flores Canyon Road, it carries approximately 47,000 vehicles per day. (City of Malibu 1995) More recent (2008) data from the California Department of Transportation (Caltrans) estimates an ADT of approximately 42,000 vehicles per day (Caltrans 2009), indicating that traffic levels have remained relatively stable over the past 10 to 15 years, experiencing little to no overall growth. The General Plan indicates that traffic on Pacific Coast Highway consists primarily of commuters during the weekday peak hours; and on the weekends, it is the primary road that provides access to the beach and other recreational activities located along the coast. Pacific Coast Highway is also a designated bicycle route. (City of Malibu 1995)

The City's General Plan identifies ten key intersections along the length of the Pacific Coast Highway. The three key intersections located closest to the project site operate as follows:

- Pacific Coast Highway/Corral Canyon Road – located approximately 2.4 miles to the west of the project site – operates at LOS A during both the AM and PM peak hours.
- Pacific Coast Highway/Malibu Canyon Road – located less than a mile to the northeast of the project site, across Pacific Coast Highway from Malibu Bluffs Park. However, to access this intersection, drivers must take Malibu Road to Pacific Coast Highway and backtrack on Pacific Coast Highway, so the driving distance is approximately 2 miles. This intersection operates at LOS A during the AM peak hour and LOS B during the PM peak hour.

- Pacific Coast Highway/Las Flores Canyon – located approximately 3.7 miles to the east of the project site – operates at LOS C during the AM peak hour and LOS D during the PM peak hour.

The only location identified with congested conditions is the intersection of Pacific Coast Highway with Topanga Canyon Road, located almost 7 miles to the east of the project site. (City of Malibu 1995)

Malibu Road is a 2-lane local access road. Based on Highway Capacity Manual guidelines (Transportation Research Board 2000), the capacity of the local road is estimated at 500 vehicles per lane per hour, or 1,000 vehicles per hour. Observation of the road indicates very low traffic volumes under existing conditions; and the road is estimates to operate at LOS A.

Public parking in the area is provided on existing shoulder on Malibu Road. At the proposed Malibu Road Accessway site, the shoulder has capacity for approximately 12 to 15 vehicles to park, adjacent to the site on the south side of the road. The remainder of the south side of the road primarily fronts single family homes, so very little additional public parking is available. The majority of additional parking space is located on the north side of Malibu Road, where fewer houses are located. Within 500 feet of the project site, there are pockets of shoulder on the north side of Malibu Road that would accommodate parking for approximately 20 to 30 vehicles. Observation of the area indicates that some of the available parking supply is already being utilized under existing conditions.

Traffic Conditions With Project

Traffic generated by the proposed Malibu Road Beach Accessway would be constrained by available parking; and no additional parking is proposed as part of the project. Thus, the most conservative estimate of vehicles generated at any given time would be approximately 45 vehicles, if all available parking spaces were utilized by vehicles generated by the accessway (as noted above, some existing parking supply is already being utilized). In the unlikely event that all 45 vehicles were generated in the same hour, this represents less than 5% of the estimated capacity of the road (or an increase in V/C of less than 0.05). It is expected that even under this very conservative scenario, operations on Malibu Road would remain at LOS A.

Potential traffic generated by the Malibu Road Beach Accessway represents less than 1% of traffic on the Pacific Coast Highway, and thus would have a negligible effect on its operations. In addition, it is expected that very few new trips would be generated by this project. Instead, recreational travelers seeking beach access would already be on the road, whether or not the Malibu Road

Beach Accessway exists. The proposed project would provide one more option for a location where they could stop.

Conclusion

Traffic generated by the proposed Malibu Road Beach Accessway would be constrained by the parking that is available at the site. No additional parking supply is proposed as part of the project. Under the most conservative scenario, which estimates that all potential traffic that could be accommodated by available parking supply occurs during the same hour, operations on Malibu Road and on Pacific Coast Highway would remain at acceptable levels. Thus, the traffic impact that would result from the proposed project is considered to be less than significant.

References

California Department of Transportation (Caltrans). 2009. 2008 Average Annual Daily Traffic. http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/. Accessed June 2010.

City of Malibu. 1995. General Plan, Circulation and Infrastructure Element.

Transportation Research Board. 2000. Highway Capacity Manual. Special Report 209. Washington, DC.

Appendix B: Climate Change Report

Malibu Beach Road Accessway: Greenhouse Gas Technical Memorandum

Introduction

In 2002, the California State Coastal Conservancy ("Coastal Conservancy") proposed to construct a new Beach Accessway, on a vacant lot along the south side of Malibu Road, on the southern edge of the City of Malibu, in the County of Los Angeles. The proposed project would not result in operational emissions of greenhouse gases (GHGs) because it would not generate additional traffic or require additional energy to operate. As such, an analysis of operational GHG emissions is not necessary. Consequently, only GHG emissions that result from the construction of the project have been quantified. This technical memorandum presents an analysis of the potential significance of the proposed project's GHG emissions and consequent contribution to climate change.

Emission calculations in this document were based on worst-case estimates of construction activity to ensure presentation of a conservative environmental analysis.

The proposed project will result in construction emissions originating in areas under the South Coast Air Quality Management District (SCAQMD) jurisdiction. At this time, the SCAQMD has limited guidance on preferred methodological approaches for estimating project level GHG emissions due to construction. This analysis has relied on approaches and models commonly used to quantify emissions at the regional and state level to estimate direct impacts of construction activities. A full lifecycle analysis of construction emissions was not conducted. There will be no indirect impacts (such as growth-inducing effects) as a result of project implementation. In this analysis, total project emissions are presented to demonstrate compliance with the regulations of the SCAQMD.

Regulatory Background

Federal

There is currently no federal over-arching policy or regulation limiting GHG emissions. However, recent proposed legislation, court decisions and activities within the U.S. Environmental Protection Agency (EPA) indicate that federal regulation of GHGs may be forthcoming. Key EPA rulings related to GHG emissions are discussed below.

EPA Mandatory Reporting Rule - On September 22, 2009, the Administrator of the EPA signed the Final Rule (Rule) for the Mandatory Reporting of Greenhouse Gases (GHGs). The Rule was published in the Federal Register on October 30, 2009 and went into effect on December 29, 2009. The Rule requires that suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit more than 25,000 metric tons or more per year of GHG emissions submit annual reports to the EPA.

EPA 'Endangerment' and 'Cause or Contribute' Findings -On December 7, 2009, the Administrator of the EPA signed two findings regarding GHGs. The first finds that the current and projected concentrations of the six key well-mixed GHGs in the atmosphere—carbon dioxide (CO_2), methane

(CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)— threaten the public health and welfare of current and future generations. The second finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution that threatens public health and welfare. These findings do not themselves impose any requirements on industry or other entities.

State

The California legislature has passed numerous pieces of legislation and the Governor issued several executive orders since 2005 related to GHG emissions and climate change. While no single regulation currently limits the emissions of a single project, collectively, the laws and regulations described below set a quantitative, state-level GHG reduction target and establish the state's approach and institutional framework for reaching this target. Key state regulations related to GHG emissions are described below.

Executive Order S-3-05 -Executive Order S-3-05 establishes GHG reduction targets for the State of California. The targets call for a reduction of GHG emissions to 2000 levels by 2010; a reduction of GHG emissions to 1990 levels by 2020; and a reduction of GHG emissions to 80% below 1990 levels by 2050. The California Environmental Protection Agency (CalEPA) will coordinate development and implementation of strategies to achieve the GHG reduction targets.

Assembly Bill 32 - Assembly Bill 32 (AB 32) codifies a comprehensive program of regulatory and market mechanisms to achieve specific reductions of GHG emissions in California. It designates the ARB as responsible for monitoring and reducing GHG emissions. A Scoping Plan which identifies the mechanisms for achieving the target reductions was approved on December 11, 2008. The measures identified must be adopted through the normal rulemaking process.

CARB Mandatory Reporting Rule - On December 2, 2007 the California Air Resources Board (CARB) approved a Regulation for the Mandatory Reporting of Greenhouse Gas Emissions, which came into effect in January 2009, fulfilling one of the CARB's responsibilities under AB 32. The rule specifies that cement plants, oil refineries, hydrogen plants, electric generating facilities, cogeneration facilities, electric retail providers, and other facilities emitting more than 25,000 metric tons per year of GHGs must submit annual reports of their emissions to the CARB and these emissions must be verified by a third party.

Senate Bill 97 - Senate Bill 97 (SB 97) requires that the Office of Planning and Research (OPR) prepare guidelines regarding the feasible mitigation of GHG emissions or the effects of GHG emissions as required by CEQA. On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the state CEQA Guidelines for greenhouse gas emissions. The CEQA Guidelines, as amended in 2010, require lead agencies to analyze a project's GHG emissions. The guidelines confirm the discretion of lead agencies to determine appropriate significance thresholds, but require the preparation of an EIR if "there is substantial evidence that the possible effects of a particular project are still cumulatively considerable not withstanding compliance with adopted regulations or requirements" (§15064.4).

Impact Assessment Methodology

Construction of the project would generate GHG emissions from the following typical construction activities:

- Construction workers traveling to and from project sites,
- Delivery and hauling of construction supplies and debris to and from project sites,
- Fuel combustion by construction equipment (including demolition, site preparation and grading equipment)

The following construction schedule was used to model GHG emissions:

Table 1. Assumed Project Schedule

Phase	Start Date	End Date	Weeks	Work Days
Demolition	12/15/10	12/30/10	2	10
Grading	12/18/10	1/1/2011	2	10
Construction – Pile Driving	1/2/11	2/14/10	6	30
Construction – Other Work	12/15/2010	1/26/2010	6	30
Paving	1/27/20111	2/10/2011	2	10
Finish Work	2/11/2011	3/11/2011	4	20
Project	*10/1/2010*	*3/11/2011*	*12*	*110*

Emissions from off-road and on-road heavy construction equipment and worker commute trips were estimated using the URBEMIS2007 (version 9.2.4) model and emission factors from the *California Climate Action Registry General Reporting Protocol,* Version 3.1 (CCAR Protocol) (California Climate Registry 2009). Consistent with professional norms, on-road heavy equipment and worker commute vehicles were assumed to be travelling 30 miles per trip at 35 miles per hour (mph). The URBEMIS model calculates emissions using CARB's OFFROAD2007 and EMFAC2007 emission factors for off-road equipment and on-road internal combustion emissions. Specific construction equipment types and their associated emissions for construction activities were selected based on data provided by the Coastal Conservancy, URBEMIS2007 default values, and professional judgment.

URBEMIS does not quantify CH_4 and N_2O emissions, although these two pollutants are known to be emitted from construction equipment on on-road vehicles. CH_4 and N_2O emissions from off-road construction equipment were calculated from anticipated fuel consumption, which in turn can be estimated from the modeled CO_2 emissions and emission factors from the CCAR Protocol (10.15 kilogram CO_2 per gallon of diesel fuel). Construction equipment using diesel fuel emits 0.58 gram CH_4 per gallon and 0.26 gram N_2O per gallon. These emissions were then converted to carbon dioxide equivalents (CO_2e) using the global warming potentials (GWPs) of each gas. Detailed calculations and URBEMIS model run outputs can be found in Appendix A.

For on-road trucks, including material delivery and spoil hauling trucks, CO_2, CH_4 and N_2O emissions were estimated using anticipated miles traveled and emission factors from URBEMIS and the CCAR. According to the State Coastal Conservancy, there would be 22 truckloads of concrete, one trip each for the delivery of fencing, asphalt, railings, guardrail, and a trash can. It was assumed that demolition of the guardrail on the project site would require two truck trips. The total number of truck trips is therefore 29 over the course of the project. It was assumed that the average travel distance is 30 miles one-way (or 60 miles round-trip). It is also anticipated that trucks will be idling onsite during material delivery and concrete pouring and that the worst case idling time for heavy-duty trucks would be 8 hours for demolition trucks (4 each), 20 hours for material delivery trucks (4 each), and 176 hours for concrete trucks (8 each), for a total of 204 hours of idling over the course of

the project. The URBEMIS emission factor for CO_2 for heavy-duty trucks traveling 35 mph is 4.03 lbs per mile. On-road trucks using diesel fuel emit 0.0051 gram CH_4 per mile and 0.0048 gram N_2O per mile. For idling emissions, the CO_2 emission factor from the EMFAC model is 6,342 grams per hour, or 14 pounds per idle-hour. The CH_4 and N_2O emission factors are 0.556 and 0.26[1] grams per idle-hour, respectively.

For worker commutes, CO_2, CH_4 and N_2O emissions were estimated using anticipated miles traveled and emission factors from URBEMIS and the CCAR Protocol. It was assumed that the project would require 5 workers per day and that the average commute distance is 30 miles one-way (or 60 miles round-trip), resulting in 300 miles traveled per day. The URBEMIS emission factor for CO_2 for medium-duty passenger vehicles traveling 35 mph is 1.64 lbs per mile. The CCAR emission factors for CH_4 and N_2O for model year 1987-1993 gasoline light trucks[2] are 0.0813 and 0.1035 grams per mile, respectively.

The Coastal Conservancy provided a partial list of equipment expected for each project phase. URBEMIS model defaults for additional construction equipment were used to estimate emissions for additional equipment expected to operate on the site. The following construction equipment list was used to estimate off-road GHG emissions:

Table 2. Assumed Project Construction Equipment List

Phase	Construction Equipment	Number	Horsepower	Daily Hours of Operation
Demolition	Tractors/Loaders/Backhoes[b]	1	108	8
	Concrete/Industrial Saws[b]	1	10	8
Grading	Graders[b]	1	174	8
	Tractors/Loaders/Backhoes[b]	1	108	8
Construction – Pile Driving	Bore/Drill Rig[a]	1	291	8
	Crane[a]	1	399	8
	Tractors/Loaders/Backhoes[b]	1	108	8
Construction – Other Work	Crane[a]	1	399	8
	Tractors/Loaders/Backhoes[b]	1	108	8
Paving	Cement and Mortar Mixers[a]	1	10	8
	Tractors/Loaders/Backhoes[b]	1	108	8
Finish Work	NA	NA	NA	NA

Notes:

[a] Provided by the SCC

[b] Selected based on URBEMIS2007 default values and professional judgment

[1] EMFAC does not provide emission factors for N_2O. Consequently, the diesel emission factor for N_2O per gallon consumed from the CCAR Protocol (0.26g/gallon) was used assuming heavy-duty trucks consume approximately 1 gallon of diesel fuel per hour of idling (Gaines et al., 2006).

[2] Emission factors for model year 1987-1997 gasoline light trucks were selected because they are the highest emission factors for gasoline light trucks provided by the CCAR Protocol.

Significance Criteria

The SCAQMD has not adopted final significance thresholds for project level GHG emissions due to either construction or operations of the project. However, interim guidance from the SCAQMD is available and discussed here. The thresholds listed below were used to determine the significance of impacts associated with the project's GHG emissions, unless otherwise specified. SCAQMD guidance states that for the purposes of determining whether or not GHG emissions from affected projects are significant, estimates of project emissions should account for direct, indirect, and, to the extent information is available, life cycle emissions during construction and operation. Construction emissions will be amortized over the life of the project, defined as 30 years, added to the operational emissions, and compared to the applicable interim GHG significance threshold tier (SCAQMD 2008).

An impact related to climate change was considered significant if it would:

- conflict with an applicable plan, policy or regulation adopted for the purposes of reducing the emissions of greenhouse gases;, or
- generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment.[3]

The SCAQMD recommends a tiered decision tree approach when determining significance of a project's GHG emissions.

Tier 1 – evaluate whether or not the project qualifies for any applicable exemption under CEQA. If the project does not qualify for an exemption, then it would move to the next tier.

Tier 2 – determine whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. The GHG reduction plan must, at a minimum, comply with AB 32 GHG reduction goals; include emissions estimates agreed upon by either CARB or the SCAQMD, have been analyzed under CEQA, and have a certified Final CEQA document. If the proposed project is consistent with the local GHG reduction plan, its associated GHG emissions are considered less than significant. If the project is not consistent with a local GHG reduction plan, the GHG reduction plan does not include all of the components described above, or there is no adopted GHG reduction plan, the project would move to tier 3.

Tier 3 – identify small projects that would not likely contribute to significant cumulative GHG impacts. However, because of the magnitude of increasing global temperatures from current and future GHG emissions, staff is recommending that all projects must implement some measure or measures to contribute to reducing GHG emissions. Therefore, Tier 3 includes a requirement that all projects with GHG emissions less than the screening level must include efficiency components that reduce a certain percentage beyond the requirements of Title 24 (Part 6, California Code of Regulations), California's energy efficiency standards for residential and nonresidential buildings. Project proponents would also have to reduce by a specified percentage the electricity demand from water use, primarily electricity used for water conveyance.

Industrial Projects: A threshold of approximately 10,000 MTCO2eq/yr emissions would capture 90 percent of the GHG emissions from new industrial projects. SCAQMD staff recommends that this value be used by lead agencies for industrial developments and stationary sources.

[3] Refer to the SCAQMD's decision tree approach below for interim quantitative thresholds of significance.

Residential and Commercial Projects: A threshold of approximately 3,000 MTCO2eq/yr emissions would capture 90 percent of the GHG emissions from new residential or commercial projects. SCAQMD staff recommends that this value be used by lead agencies for residential and commercial developments, including industrial parks, warehouses, etc.

Tier 4 –Four compliance options as follows:

- **Compliance Option 1** – the lead agency would calculate GHG emissions for a project using a Business as Usual ("BAU") methodology. Once GHG emissions are calculated, the project proponent would need to incorporate design features into the project and/or implement GHG mitigation measures to demonstrate a 30 percent reduction from BAU.
- **Compliance Option 2** –early compliance with AB 32 through early implementation of CARB's Scoping Plan Measures.
- **Compliance Option 3** – this compliance option consists of establishing sector-based performance standards. For example, it may be possible to use the 1990 inventory required under AB 32 to establish an efficiency standard such as pounds per person, pounds per worker, pounds per square feet, pounds per item manufactured, etc. When calculating GHG emissions from a project, if they are less than the established efficiency standard the project would not be significant relative to GHG emissions, while projects exceeding the efficiency standard would be significant.

If the lead agency or project proponent cannot achieve the performance standards on any of the compliance options in Tier 4, GHG emissions would be considered significant.

Tier 5 – Under this tier, the lead agency would quantify GHG emissions from the project and the project proponent would implement offsite mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level. In addition, the project proponent would be required to provide offsets for the life of the project, which is defined as 30 years. If the project proponent is unable to obtain sufficient offsets, incorporate design features, or implement GHG reduction mitigation measures to reduce GHG emission impacts to less than the screening level, then GHG emissions from the project would be considered significant.

Greenhouse Gas Emissions Summary

Table 3 summarizes the GHG emissions associated with construction of the proposed project. As shown in Table 3, total CO_2e emissions from all construction activities anticipated to occur would amount to approximately 116 metric tons of CO_2e. Amortized over a 30-year project lifetime, as recommended by the SCAQMD, project emissions are 3.9 metric tons CO_2e per year.

Table 14. Construction Greenhouse Gas Emissions (metric tons CO_2e/year)

Emissions Source	CO_2	CH_4	N_2O	Total CO_2e
Off-road Construction equipment	84.71	0.10	0.67	85.48
On-road trucks: idling	1.29	0.00	0.02	1.31
On-road trucks: travel	3.18	0.00	0.00	3.18
Worker commute trips	24.51	0.06	1.06	25.62
Total	*113.69*	*0.16*	*1.75*	*115.60*
Total Project Emissions Amortized over a 30-year project lifetime	**NA**	**NA**	**NA**	**3.85**
Sources: URBEMIS2007, EMFAC2007, California Climate Registry 2009				

Impact Analysis

Impact GHG-1: conflict with an applicable plan, policy or regulation adopted for the purposes of reducing the emissions of greenhouse gases; or generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment.

Following the interim GHG significance guidance adopted by the SCAQMD, the proposed project was evaluated based on the 5 tier approach outlined above.

Tier 1 – The project does not qualify for an applicable exemption under CEQA.

Tier 2 – The City of Malibu does not currently have an adopted GHG reduction plan. Therefore the project should be considered under Tier 3, per the SCAQMD's interim guidance, described above.

Tier 3 – SCAQMD CEQA Guidelines do not specify a quantitative threshold for construction GHG emissions. However, the SCAQMD proposes using a 3,000 $MTCO_2eq/yr$ significance threshold for annual operational and annualized construction GHG emissions from residential and commercial projects (since the project is not classified as an industrial or stationary source). As seen in Table 1, annualized construction emissions from the project are less than 0.2% of this proposed annual threshold. Although the GHG emissions that will result from the construction of the project are well below the Tier 3 threshold, the SCAQMD recommends as part of Tier 3 that project proponents undertake all feasible actions to increase energy efficiency and GHG emissions associated with a project as a best management practice and demonstration of commitment to the state's GHG emissions reduction goals. Actions that will reduce emissions, without further action by the proponent are described below. Additional actions to be taken by the proponent are described under Additional Measures.

Existing CARB regulations (Title 13 of the California Code of Regulations, Sections 2480 and 2485, 2008), which limit idling of diesel-fueled commercial motor vehicles, would help to limit GHG emissions associated with project-related construction vehicles. In addition, CARB's proposed Early

Action Measures (pursuant to the California Global Warming Solutions Act of 2006) include other emission reduction measures for diesel trucks and diesel off-road equipment. The CARB has reviewed and adopted many Early Action Measures, including Pavley fleet regulations (AB 1493), the Low Carbon Fuel Standard, and GHG reduction measures for heavy-duty on-road vehicles. These reductions are not reflected in Table 1 above, as the URBEMIS, OFFROAD and EMFAC models do not currently account for the likely impacts of these regulations. Therefore the estimates in Table 1 should be considered conservative. Equipment used for construction of the project could be subject to these and additional requirements (pending adoption of additional measures). Once such measures go into effect, the Coastal Conservancy and construction contractors would be subject to these requirements, and the Coastal Conservancy would implement these measures as required; emissions from Coastal Conservancy construction activities would be reduced accordingly. Since this project's construction would occur in late 2010 and 2011, the applicable Early Action Measures adopted in 2010 would apply to the project. Additionally, as described below, the Coastal Conservancy intends to implement the following GHG reduction actions during construction:

- The Coastal Conservancy will require that contractors maintain tire inflation to the manufacturers' inflation specifications.
- The Coastal Conservancy will implement a construction worker education program.[4]

SCAQMD CEQA Guidelines do not specify a quantitative threshold for construction GHG emissions. However, the SCAQMD proposes using a 3,000 $MTCO_2eq/yr$ significance threshold for GHG emissions from residential and commercial projects. Given the small amount of GHGs that would be emitted from the proposed project during construction (116 metric tons CO_2e; 3.9 metric tons CO_2e/year annualized), continuing implementation of GHG reduction actions by the Coastal Conservancy and the lack of change between existing and future operation-related activities[5], the proposed project would not conflict with the state's goals of reducing GHG emissions to 1990 levels by 2020. Therefore, this potential impact would be less than significant under the SCAQMD CEQA Guidelines.

Additional Measures

As described above, annual emissions of GHGs do not exceed SCAQMD's proposed threshold of 3,000 metric tons CO_2e/year. Even though construction GHG emissions are less than this proposed annual threshold, the SCAQMD recommends the project proponent would need to incorporate design features into the project and/or implement GHG additional measures to demonstrate a 30-percent reduction from BAU. As such, the Coastal Conservancy is considering implementing the following additional measures.

[4] The education program could include such things as limiting idle time of construction equipment, using low-sulfur diesel fuels in construction equipment, regular maintenance of construction equipment, tire inflation, and using grid power whenever feasible to avoid on-site generators.

[5] The proposed project would not result in operational emissions of GHGs because it would not generate additional traffic or require additional energy to operate.

Implement Best Management Practices (BMPs) to Reduce Construction Tailpipe Emissions

The Coastal Conservancy will implement all applicable and feasible measures to reduce GHG emissions from diesel-powered construction equipment. This requirement will be incorporated into the construction contract. These measures include:

- Contractors must maintain tire inflation to the manufacturers' inflation specifications.
- Implement a construction worker education program.
- Use alternatively fueled construction equipment on site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel.

Minimize Greenhouse Gas Emissions during Construction

The Coastal Conservancy will incorporate the following measures into the construction contract to reduce GHG emissions.

- Encourage the use of biodiesel fuel for diesel-powered equipment and vehicles.
- Encourage construction workers to carpool.
- Encourage recycling construction waste.

In addition to these additional measures, the Coastal Conservancy is implementing the following voluntary actions to further reduce GHG emissions:

- Coastal Conservancy staff will work with applicants to identify, evaluate, and incorporate reasonable measures to reduce the GHG emissions of Conservancy-funded projects. The Conservancy will encourage use of BMPs and innovative designs that reduce GHG emissions and, as possible will support the development of such practices and designs through funding and other actions.
- Project design and construction methods must include measures to avoid or minimize GHG emissions to the extent feasible and consistent with the project objectives.
- CARB has adopted AB-32 Early Action Measures, and equipment used during construction of the project will be subject to these requirements. The Coastal Conservancy will implement the appropriate Early Action Measures as they become effective.

References Cited

Printed References

California Climate Action Registry. 2009. *California Climate Action Registry General Reporting Protocol: Reporting Entity-Wide Greenhouse Gas Emissions.* Version 3.1. Appendix C, Table C.3, C.4, and C.6. January.

Gaines, L., A. Vyas, and J. L. Anderson. 2006. *Estimation of Fuel Use by Idling Commercial Trucks. Center for Transportation Research*. January. Waschington, D.C. Available: <http://www.transportation.anl.gov/pdfs/TA/373.pdf>. Accessed: June 7, 2010.

Jones & Stokes Associates. 2007. *Software User's Guide: URBEMIS2007 for Windows.* Version 9.2. Appendix A, Page A-6. November. Sacramento, CA. Prepared for: South Coast Air Quality Management District.

South Coast Air Quality Management District. 2008. *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold.* October. Diamond Bar, CA.